



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/054,522 | 01/22/2002 | Chase T. Tingley | CRESC-010XX | 5980 |

7590 10/25/2006

ANSEL M. SCHWARTZ
ATTORNEY AT LAW
201 N. CRAIG STREET
SUITE 304
PITTSBURGH, PA 15222

EXAMINER

TAYLOR, NICHOLAS R

ART UNIT PAPER NUMBER

2141

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,522

Applicant(s)

TINGLEY ET AL.

Examiner

Nicholas R. Taylor

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-15 have been presented for examination and are rejected.

Response to Arguments

2. Applicant's arguments filed August 11th, 2006, have been fully considered but they are deemed not persuasive.

3. In the remarks, applicant argued in substance that:

(A) Dobbins teaches a network system that is intended to allow an architecture that can easily scale to a large number of users. Applicant's claimed invention focuses on a system for translating IP addresses to ethernet/MAC addresses that operate correctly for a network device that is connected to multiple virtual IP networks.

Therefore, Dobbins has nothing to do with the focus of applicant's claimed invention.

As to point (A), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. Dobbins enables the translation of IP addresses to MAC addresses operating for a device has a connection to multiple virtual IP networks (Dobbins, col. 17, lines 6-46). If the prior art structure is capable of performing the intended use, then it meets the claimed invention.

(B) The prior art of Dobbins fails to teach forming a request message at a first virtual networking device connected to a first virtual network and a second virtual network at a same time which share a physical link and hosts on each network may both wish to use a same IP address. Furthermore, Dobbins fails to teach that the second virtual network uses the virtual network identifier value to determine a virtual router responsible for responding to the request message.

As to point (B), Dobbins teaches a network device that is connected to a first virtual network and a second virtual network at the same time (Dobbins, fig. 1, e.g. where device 20 on first "red" VLAN is connected to both "red," "blue," and "default" VLANs). Dobbins' system operates on a connected meshed topology of shared "physical links" (Dobbins, col. 9, lines 11-16). Hosts on each network may both wish to use a same IP address (Dobbins, col. 8, lines 55-66, where the system bases resolution on MAC addresses and is "protocol-insensitive" to upper-level IP protocol; e.g., see col. 10, lines 18-58 and fig. 3B, where the table of fig. 3B includes different hosts that reside on separate VLANs yet still both use the address-limited subnet of 134.141.42.XXX).

Additionally, Dobbins teaches that the second virtual network uses the virtual network identifier value to determine a virtual router responsible for responding to the request message (Dobbins, col. 17, lines 6-46; e.g. the process of 7A corresponding to the steps where a packet resolves to a different VLAN and is designated with an open policy).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Dobbins et al. (U.S. Patent 6,711,171).

6. As per claims 1, 8, and 15, Dobbins teaches a method for identifying a physical address associated with a virtual address, wherein said physical address is associated with a network interface of a network device, wherein said virtual address is also associated with said network device, comprising: (Dobbins, col. 8, lines 55-65; col. 9, lines 11-27)

forming a request message at a first virtual networking device (Dobbins, col. 6, lines 6-10; col. 12, lines 55-66)

connected to a first virtual network and a second virtual network at a same time which share a physical link (Dobbins, fig. 1, where, e.g., device 20 on first "red" VLAN is connected to devices 21-31 on second "blue" VLAN and third "default" VLAN, while sharing a physical link)

and hosts on each network may both wish to use a same IP address, (Dobbins, col. 8, lines 55-66, where the system bases resolution on MAC addresses and is "protocol-insensitive" to upper-level IP protocol; e.g., see col. 10, lines 18-58 and fig. 3B, where the table of fig. 3B includes different hosts that reside on separate VLANs yet still both use the address-limited subnet of 134.141.42.XXX)

said request message including said virtual address and a virtual network identifier value, (Dobbins, col. 17, lines 6-24 and the example of col. 12, line 55 to col. 13, line 32)

wherein said virtual network identifier value is stored in a field within a header of said request message separate from said virtual address, said virtual network identifier value associated with a first virtual network, said virtual network having a private address space including said virtual address; (Dobbins, col. 10, lines 6-44; also col. 12, lines 41-65, e.g. the VLAN-ID of ES1 present in ES1 and S1 traffic)

transmitting said request message over a communication link to a second virtual network device of the second virtual network which uses the virtual network identifier value to determine a virtual router responsible for responding to the request message; (Dobbins, col. 17, lines 6-46; e.g. the process of 7A corresponding to the steps where a packet resolves to a different VLAN and is designated with an open policy)

receiving a response to said request message at the first virtual network, said response including said physical address associated with said network interface of said network device; storing said physical address of said network device associated with said virtual address in an entry in a data structure, wherein said entry further includes

Art Unit: 2141

said virtual network identifier and said virtual address; and (Dobbins, col. 13, lines 7-16, wherein the target responds with VLAN, MAC, etc. information; col. 13, lines 27-32)

translating IP addresses associated with the first virtual network to Ethernet/MAC addresses associated with the second virtual network with an address resolution table generated and maintained by the first virtual network device (Dobbins, col. 17, lines 6-31; see also col. 10, lines 6-44).

7. As per claims 2 and 9, Dobbins teaches the system further wherein said response to said request message includes said virtual address, and further comprising:

determining, in response to header information in said response to said request message, a virtual network number identifying said virtual network; and identifying said entry in said data structure in response to said virtual network number and said virtual address (Dobbins, col. 13, lines 27-32; col. 10, lines 6-44; e.g. using the process of col. 17, lines 6-31; see also Fig 7a).

8. As per claims 3 and 10, Dobbins teaches the system further comprising:

receiving a subsequent packet; determining a virtual network number associated with said subsequent packet; comparing said virtual network number associated with said subsequent packet to said virtual network number identifying said virtual network; determining a destination address of said subsequent packet; comparing said destination address of said subsequent packet with said virtual address; and (Dobbins, col. 17, lines 6-24)

forwarding said subsequent packet based on information contained in said entry in said data structure in the event that said virtual network number associated with said subsequent packet matches said virtual network number identifying said virtual network and said destination address of said subsequent packet matches said virtual address (Dobbins, col. 17, lines 25-32).

9. As per claims 4 and 11, Dobbins teaches the system further comprising:

selecting, responsive to said virtual network number, a virtual router from a plurality of virtual routers; and wherein said forwarding of said packet is performed in response to said virtual router (Dobbins, col. 17, lines 25-54).

10. As per claims 5 and 12, Dobbins teaches the system further comprising:

selecting, responsive to receipt of said subsequent packet, a protocol task associated with a predetermined routing protocol; and wherein said forwarding of said packet is performed in response to said protocol task and said virtual router (Dobbins, col. 17, lines 25-54).

11. As per claims 6 and 13, Dobbins teaches the system further wherein said virtual address is a network layer address (Dobbins, col. 10, lines 6-44).

12. As per claim 7, Dobbins teaches the system further wherein said virtual address is a virtual Internet Protocol (IP) address (Dobbins, col. 10, lines 6-44).

13. As per claim 14, Dobbins teaches the system further wherein said virtual address is a virtual Internet Protocol (IP) address (Dobbins, col. 10, lines 6-44).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Art Unit: 2141

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicholas Taylor
Examiner
Art Unit 2141


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER